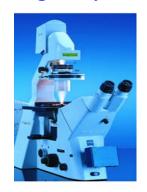
Confocal Microscope Facility

The combination of the Zeiss LSM 510 Meta confocal microscope and two picosecond Coherent Titanium: Sapphire lasers allows us to perform a wide array of microscopies on chemical and biological systems.



Microscopies used: confocal reflectance

confocal fluorescence

multi-photon fluorescence (requires external lasers) second harmonic generation (requires external lasers)

coherent anti-Stokes Raman scattering (requires external lasers)

The multiple excitation wavelengths, detectors, and filter sets of the Zeiss microscope allow simultaneous implementation of multiple microscopies.

Laser lines available: 458, 488, 514, 543, 633 nm

700 – 970 nm (picosecond/femtosecond) from the external Ti:Sa lasers

Detectors available: two photomultiplier tubes (backward, or epi, direction)

one diffraction grating/photomultiplier tube combination (epi direction)

-- allows many signals of different wavelength to be collected simultaneously one nondescanned photomultiplier tube detector (forward or epi direction)

The wide array of features of the Zeiss microscope allows implementation of the techniques mentioned above and allows the study of a wide range of chemically, physically, and biologically interesting systems.